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# *PARAMETOPELLA INQUILINUS*, NEW SPECIES FROM DELAWARE BAY OYSTER BEDS (AMPHIPODA: STENOTHOIDAE)

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The genus *Parametopella* is, at present, characterized by the following features (Barnard, 1969): linear article 2 of pereopods 4 and 5; uniarticulate palp of maxilla 1; mandible without palp. To date, only three species in this genus are known: *P. stelleri* Gurjanova from the Russian Arctic, *P. ninis* Barnard from southern California, and *P. cypris* (Holmes) from northeastern North America. This paper describes a new species of *Parametopella* from the polyhaline waters of Delaware Bay, U.S.A.

STENOTHOIDAE

*Parametopella* Gurjanova, 1938

**Parametopella inquilinus**, new species

Figures 1–2

*Diagnosis*: Antenna 1, peduncle segments 1 and 2 subequal in length; gnathopod 2 powerful, palm with large teeth near hinge, excavate posteriorly with strong tooth on posterior corner; coxal plate 4 greatly expanded covering coxae 3 through 7.

*Description of male*: length 3.0 mm. Head small, interantennal angle rounded. Antennae about ⅓ length of body.

Antenna 1 peduncle article 1 stout, wider than article 2; articles 1 and 2 of subequal length; article 3 about ¼ length of article 2. Antenna 2 peduncle nearly as long as antenna 1; last 2 peduncle articles subequal in length; flagellum of 4 to 6 segments.

Mouthparts typical for genus. Mandible without palp; maxilla 1 palp uniarticulate; maxilliped outer plate vestigial, inner plate small, sparsely setose, palp with few, strong setae.

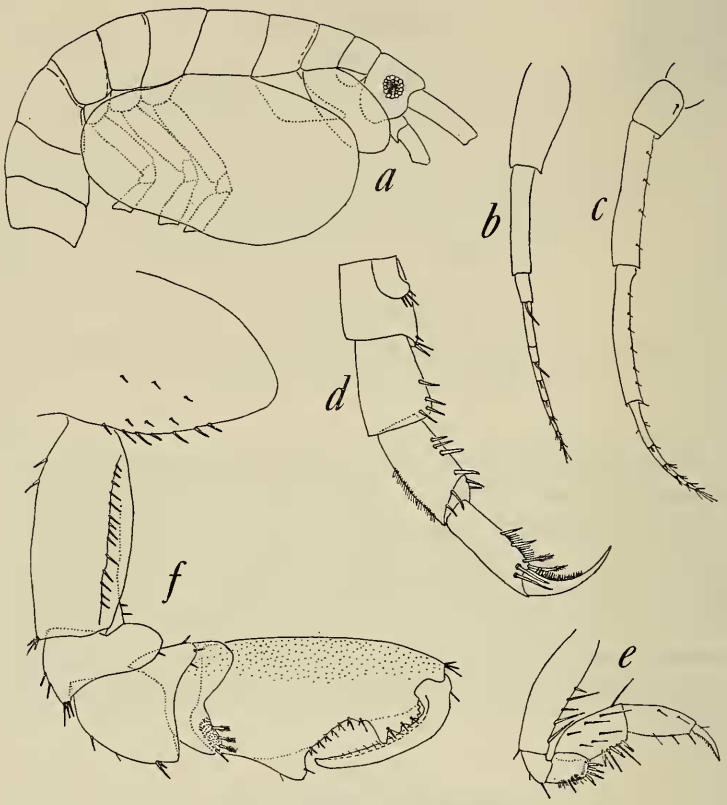


FIG. 1. *Parametopella inquilinus*, new species: a, Side view of body; b, Antenna 1; c, Antenna 2; d, Third maxilliped; e, Male gnathopod 1; f, Male gnathopod 2.

Gnathopod 1 simple; dactyl finely pectinate; propodus with 3 setae on posterior margin; article 5 equal in length to article 6, posterior margin with 3 groups of strong, pectinate setae; distal margin of article 4 with cluster of pectinate setae and group of short spines; article 2 with anterior row of long, simple setae.

Gnathopod 2 strong; palm of propodus strongly excavate between distal group of teeth and large proximal tooth; article 5 with cluster of pectinate setae on postero-distal corner; article 3 with thin, transparent, anteriorly-directed projection; article 2 armed with anterior row of short, simple setae; coxal plate large, not covered distally by coxal plate 4, lower margin with several short spines.

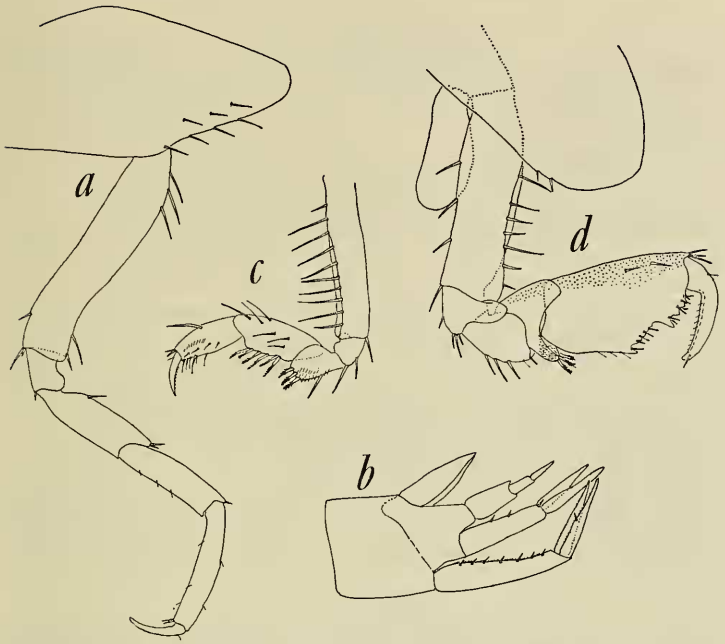


Fig. 2. *Parametopella inquilinus*, new species: a, Pereopod 1; b, Urosome; c, Female gnathopod 1; d, Female gnathopod 2.

Pereopod 3 coxal plate short, sharply tapered anteriorly, lower margin lightly armed along anterior portion; article 2 with 3 proximal and 2 distal spines along anterior margin; appendage notable for its lack of setation. Pereopod 4, coxal plate large, extending anteriorly to overlap slightly coxal plate 2 and posteriorly to cover coxal plate 7. Pereopods 5–7, article 2 slender.

Urosome segments 2 and 3 fused; uropod 1 outer ramus with single spine, peduncle with 7 spines; uropod 2, peduncle with 2 dorsal and single distal spine, rami without spines; uropod 3 uniramous, unarmed, two segments of ramus equal in length to peduncle. Telson entire, without spines.

*Female*: Similar to male; gnathopod 1 article 2 anterior margin more setose; palm of gnathopod 2 not as strongly excavate.

*Holotype*: ♂, USNM No. 152671.

*Paratypes*: 23 ♂ ♀, USNM No. 152672.

*Type-locality*: Oyster beds in Delaware Bay, 75°22′W longitude, 39°12′N latitude; recorded salinity range 18–25‰, temperature range 1–26°C, depth 8 m; substratum consists of hard, oyster shell reefs intercalated with muddy shells and mud (Maurer and Watling, 1973).

*Distribution*: This species has thus far been found only in Delaware Bay. It occurs on hard substrata, usually in association with the hydroid *Tubularia crocea*. When the hydroid is found on fouling plates, *Parametopella inquilinus*, *Parapleustes aestuarius* Watling and Maurer, and *Stenothoe minuta* Holmes are found in large numbers in the sediment trapped at the base of the colony. In the oyster community, Maurer and Watling (1973) incorrectly identified this species as *P. cypris*.

*Relationships*: This species differs from *P. stelleri* (see Gurjanova, 1951) by its lack of an anteriorly-directed process on antenna 1 peduncle segment 1. It differs from *P. ninis* (see Barnard, 1962) by the large excavation of the palm of gnathopod 2 and by the short coxal plate 3. *P. vulgaris* can also be distinguished from *P. cypris* (see Holmes, 1905; Bousfield, 1973) by the form of gnathopod 2, and also by the antenna 1 peduncle segment 1 being shorter than segments 2 and 3 combined, the very long peduncle segments 4 and 5 of antenna 2, and by coxal plate 4 not covering the distal end of coxal plate 2.

*Etymology*: The specific name, from the Latin noun inquilinus = sojourner, refers to its inquilinous life habit.

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## Literature Cited

Barnard, J. L. 1962. Benthic marine Amphipoda of southern California: families Amphilochidae, Leucothoidae, Stenothoidae, Argissidae, Hyalidae. Pacific Nat. 3:116–163.

———. 1969. The families and genera of marine gammaridean Amphipoda. U.S. Nat. Mus. Bull. 271:1–535.

Bousfield, E. L. 1973. Shallow-water gammaridean Amphipoda of New England. Cornell University Press, Ithaca. xiv + 312 pp.

Gurjanova, E. 1951. Bokoplavy morej SSSR i sporedel'nykh vod (Amphipoda-Gammaridea). Opred. po Faune SSSR, Akad. Nauk SSSR, 41:1–1029.

Holmes, S. J. 1905. The Amphipoda of southern New England. Bull. U.S. Bur. Fish. 24:459–529.

Maurer, D., and Les Watling. 1973. Studies on the oyster community in Delaware: the effects of the estuarine environment on the associated fauna. Int. Rev. Ges. Hydrobiol. 58:161–201.